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Plant-based Diets and Heart Disease

Veggie diets - protecting your heart!

VVF looks at the issues surrounding heart disease and shows that plant-based diets can offer both a preventative and therapeutic path out of the Western world's Number One problem.

Heart Pumping

Of all the complex jobs our bodies have to perform it sounds such a simple task to ask of our hearts - just sit there and pump. Yes that really is it - the heart just sits around day in and day out pushing the blood around the body, thereby supplying individual cells with food and oxygen. But we humans seem to be very adept at putting a spanner in the works of our pumping hearts. Not if you're veggie though! Recent studies suggest that when compared with meat-eaters, vegetarians have a lower risk of dying from heart disease by an incredible 25%! (1) How so? Well a look at the many diet-related risk factors for heart disease shows that a vegetarian diet can reduce many of these risks considerably.

Number Crunching

Cardiovascular disease (CVD) is the main cause of death in the UK with over 235,000 fatalities annually. The main forms of CVD are coronary heart disease (CHD) and stroke. Over 270,000 people suffer a heart attack each year with 125,000 of these dying. Cardiovascular disease also accounts

for high levels of serious morbidity (long-term illness) within the population. Half a million people have heart failure and around 1.5 million people suffer from angina (chest pain on exertion) (2).

Major Risk Factors and the Veggie Perspective

The major risk factors for CHD include smoking, lack of exercise, stress, high alcohol intake, a poorly balanced diet, high blood pressure, high cholesterol levels, being overweight and diabetes. Vegetarian diets are composed of the sorts of foods that have been shown over many years to help normalise many of the risk factors cited above.

Cholesterol Levels

Too much saturated fat in the diet encourages the body to increase cholesterol levels - a major risk factor for CHD. Meat and dairy are major sources of saturated fat - vegetarian and vegans diets automatically reduce this type of fat in the diet (1). The most powerful cholesterol-lowering agents are all found exclusively in plant foods - such as soluble fibre (eg oats, fruits and vegetables) and plant protein (eg soya). Of the two types of cholesterol - LDL and HDL - LDL has long been considered the most detrimental to artery health since it is directly deposited on artery walls. Recent evidence however suggests that LDL is mainly problematic to blood vessels when the LDL is damaged (oxidized). The damaged LDL stored on the inside of the arteries causes the arteries to narrow which can result in heart disease. The body's defence against damage to LDL is antioxidants - primarily the vitamins beta-carotene (the precursor to vitamin A and only found in plant foods), vitamins C and E (vitamins similarly only found in plant foods), selenium and zinc. No surprise then that studies show vegetarians have higher antioxidant levels than meat-eaters and a recent study suggests that vegetarian diets decrease the susceptibility of LDL to damage! (3,4).

Homocysteine

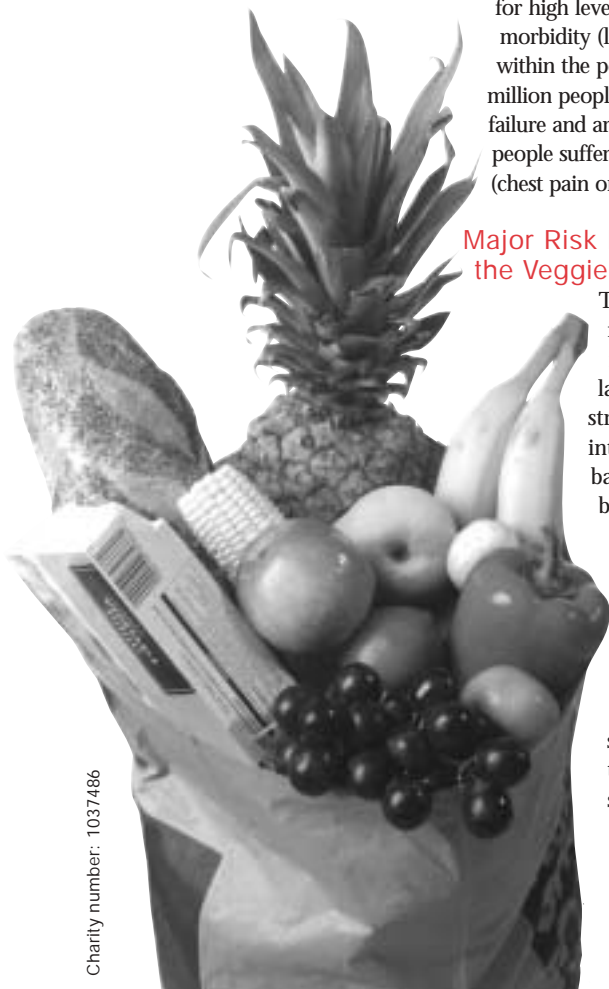
A new risk factor for heart disease - homocysteine - has recently been discovered. Homocysteine (Hcy) is an amino acid (building block of protein) produced by the body during the breakdown of another amino acid - methionine. High levels of Hcy have been linked to increased risk for heart disease and stroke - possibly by causing lesions in the blood vessels which can lead to a narrowing of the arteries. Ensuring adequate intakes of three key B-vitamins is crucial in lowering Hcy levels. Folate and vitamin B6 are found abundantly in plant foods, and vitamin B12 is found in fortified foods with a daily intake of 3 micrograms per day now being recommended (5,6). This can be provided by, for example, an average 250ml serving of fortified soya milk, plus an average 50g serving of fortified cereal and a couple of pieces of toast spread with B12 fortified margarine and B12 fortified yeast extract.

Blood Pressure

Hypertension increases the tendency for blockages to form in the arteries. Once again vegetarians come up trumps. Vegetarians suffer much less from hypertension than omnivores and adopting a meat-free diet can lower blood pressure (7,8,9,10,11). Hypertension is described as the silent killer - most people don't even know they have the condition. Encouraging the adoption of a plant-based diet would be a major step in reducing the incidence of this condition.

Weight Maintenance

Another winner for veggies is keeping to an optimal weight. Numerous studies show that, as a group, vegetarians are slimmer



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than their meat-eating counterparts (1,12,13,14,15,16). It goes without saying of course that a well balanced vegetarian or vegan diet together with regular exercise is the key to healthy weight maintenance. You can have your cake (chocolate and vegan of course!) and eat it - but best keep it for special occasions only!

Vegetarian Diet Clears Up Arteries and Offers Alternative to Aspirin

That vegetarian diets can also play a therapeutic role in heart disease treatment has long been known. The Reversal Diet devised by Californian clinician Dr Dean Ornish strongly demonstrates the power of a vegetarian diet to reverse even severe CVD. Patients in his studies who follow the near-vegan diet show a significant reduction in the hardening of their arteries (17,18,19).

Whilst aspirin is widely prescribed to reduce the risks of heart disease, there are downsides to this in terms of cost and the increased risk of ulcers. Can plant-based diets offer any alternatives here? You bet they can! A neat little study by Scottish researchers found that levels of salicylic acid - the main component in aspirin - was found to be up to 12 times higher in vegetarians than meat-eaters (20). Not surprising really when you consider that salicylic acid is widely present in fruits and vegetables- a major component of vegetarian diets.

Overall Strategy for Healthy Hearts

There are clearly huge benefits to be had from eating a diet that is plant-based. In terms of what types of foods should be chosen a few simple strategies emerge (21). Firstly, get the right source of fat in your diet. Fats are vital for the heart but not all fats are equal! Use unsaturated fats instead of saturated (mainly animal) fats. Plant sources of fat from beans, (including soya), seeds (including flaxseed), nuts (unsalted) and their oils provide the essential omega-3 & 6 fats the heart needs. Whilst oily fish contain omega-3 fats they come ready packaged with those nice little extras such as toxic chemicals! Olive oil is also heart friendly. Trans (hydrogenated)-fats (altered fats found in many processed foods) are bad news for hearts and should also be

avoided. Secondly, eat plentiful amounts of fresh fruits and vegetables. Thirdly, eat wholegrains such as wholemeal breads - processed white flour foods like white bread along with sugar are best avoided. Fourthly, eat moderate amounts of healthy sources of protein such as beans (of all types), lentils, nuts and seeds.

Good vegetarian diets are based on these four dietary strategies.

Regular physical exercise, healthy weight maintenance and avoidance of smoking are, of course, also necessary in keeping hearts healthy.

Wake Up To Plant-Based Diets

There is now a large body of scientific evidence that demonstrates unequivocally the power of plant-based diets for maintaining a healthy heart. Go veggie - your heart will thank you for it!

Summary

- Over 235,000 people die every year in the UK from cardiovascular disease.
- Compared to meat-eaters, vegetarians have a 25% lower risk of dying from heart disease.
- Major risk factors for heart disease are smoking; lack of exercise; high blood pressure; high cholesterol levels; diabetes and being overweight.
- Vegetarians tend to have lower blood pressure levels, lower cholesterol levels and, as a group, are slimmer than comparable meat-eaters.
- The most powerful cholesterol-lowering agents are all found exclusively in plant foods.
- Homocysteine is a recently discovered risk factor for heart disease. Adequate intakes of folic acid, vitamins B6 and B12 are needed to lower levels in the body.
- Vegetarian diets can help reverse cardiovascular disease by reducing the hardening of the arteries.
- Optimal dietary strategy for hearts:- plant-based diets with saturated (unhealthy, mainly animal fats) replaced with healthy, plant-based fats and oils; plentiful servings of fruits, vegetables, wholegrains and plant proteins like lentils, beans and soya. Plus regular exercise, maintaining a healthy weight and avoidance of smoking.

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